

**TITLE**

**HOUSING STRUCTURE**

**BACKGROUND OF THE INVENTION**

**Field of the Invention**

5           The present invention relates to a housing structure, and in particular to a housing structure provided with an extendable supporting component.

**Description of the Related Art**

10           Electronic apparatus or devices, such as PC or server host, external modem, game console (XBOX, PS2), etc., are generally placed in different sites or arranged in proximity to other objects. For placing those devices on a surface in a vertical orientation, an independent support or abutment is generally used between the bottom  
15           of the designated device and the surface.

          However, the support is usually a single piece based on the geometry and size of the device to be supported. It is easy to lose the support or abutment when the corresponding device is relocated or stored.

20                           **SUMMARY OF THE INVENTION**

          Accordingly, an object of the invention is to provide a housing structure with an extendable supporting component to allow stable vertical deployment on a designated surface.

25           Another object of the invention is to provide a supporting component comprising two separate and extendable plates mounted on a body of the housing

structure. The supporting component freely extends between a first position providing a first supporting region and a second position providing a second supporting region substantially larger than the first supporting region. The housing structure is more stable when the supporting component is extended to the second position.

A detailed description is given in the following embodiments with reference to the accompanying drawings.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention is more fully understood by reading the subsequent detailed description and examples with references made to the accompanying drawings, wherein:

Fig. 1A is a perspective view of a housing structure (H) according to the present invention, in a first position (I-I);

Fig. 1B is a perspective view of the housing structure (H), in a second position (II-II);

Fig. 2 is an exploded view of the housing structure (H) according to Fig. 1B;

Fig. 3A is a perspective view of the housing structure (H), in the first position (I-I) and placed on a surface (W); and

Fig. 3B is a perspective view of the housing structure (H), in the second position (II-II) and placed on the surface (W).

## DETAILED DESCRIPTION OF THE INVENTION

Referring to Fig. 1A and 1B, a housing structure H is a rectangular case for storing an electronic device (not shown) therein that can be vertically oriented.

5 The housing structure H has a rectangular body 1 and an extendable supporting component 2. The supporting component 2, serving as a contact element abutting a surface, is disposed on one side of the body 1. A first plate 2-1 and a second plate 2-2 constitute the  
10 supporting component 2 and are connected to the body 1.

In Fig. 1A, the supporting component 2 is in a first position I-I and the two plates 2-1, 2-2 together form a first supporting region  $A1+A2$ , located on the outside wall of the housing structure H.

15 In Fig. 1B, the supporting component 2 is in a second position II-II and the two plates 2-1, 2-2 are extended and form a second supporting region  $A1+A2+B1+B2+B3$ , also on the outside wall of the housing structure H, having an extended area larger than the  
20 first supporting region  $A1+A2$ .

$A1$  designates part of the area of the first plate 2-1 with respect to one side of the housing structure H, and  $A2$  designates part of the area of the second plate 2-2, coplanar to the area  $A2$ , with respect to one side of  
25 the housing structure H.  $B1$ ,  $B2$ , and  $B3$  designate three virtual areas formed by the first plate 2-1 and the second plate 2-2 when extended to the second position II-II, as shown in Fig. 1B. The virtual areas  $B1$ ,  $B2$ , and

B3 are located on the same level and are coplanar to the area A1, A2.

The first supporting region A1+A2 comprises area A1 of the first plate 2-1 and area A2 of the second plate 2-2. The second supporting region A1+A2+B1+B2+B3 comprises area A1 of the first plate 2-1, area A2 of the second plate 2-2, and the three virtual areas B1, B2, B3.

In Fig.2, an exploded view of the housing structure H is shown.

On the outside wall of the body 1, three guiding slots 10, 11, 12 serve as a first positioning portion (10, 11, 12). The first plate 2-1 and the second plate 2-2 are substantially L-shaped plates overlapping the two ridges of the body 1, respectively. The first plate 2-1 has a main portion 211 and a secondary portion 212 vertically and integrally connected to the main portion 211. The second plate 2-2 has a main portion 221 and a secondary portion 222 vertically and integrally connected to the main portion 221.

With respect to the guiding slot 10, a guiding post 20 is formed on the secondary portion 212 of the first plate 2-1. With respect to the guiding slots 11, 12, two guiding posts 21, 22 are formed on the secondary portion 222 of the second plate 2-2. The three guiding posts 20, 21, 22 together serve as a second positioning portion (20, 21, 22) to the supporting component 2.

By fitting the guiding post 20 of the first plate 2-1 to the guiding slot 10 of the body 1, the first plate 2-1 can move freely in the longitudinal direction of the guiding slot 10. By fitting the guiding posts 21, 22 of

the second plate 2-2 to the guiding slot 11, 12 of the body 1, the second plate 2-2 can move freely in the longitudinal direction of the guiding slots 11, 12.

Referring to Fig. 3A and 3B, a surface W supports the housing structure H.

The supporting component 2, situated in the first position I-I in Fig. 3A supports the body 1 on the surface W, the main portion 211 of the first plate 2-1 and the main portion 221 of the second plate 2-2 attach to the body 1, and the first supporting region A1+A2 of the housing structure H serves as a contact face with the surface W.

As the supporting component 2 in the second position II-II in Fig. 3B supports the body 1 on the surface W, the second supporting region A1+A2+B1+B2+B3's larger contact area meets the surface W. Thus, the housing structure H is effectively and stably supported on the surface W.

When this invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not limited to the disclosed embodiments, but, on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.